

CLAIMS :-

1. A thrust reverser assembly comprising at least one thrust reverser element which, during normal use in association with a jet engine, is movable between a stowed position and a deployed position and is so arranged as to experience an assisting load during movement of the element from the stowed position towards the deployed position, a source of hydraulic fluid under pressure, and, a double-acting hydraulic piston and cylinder device for moving said element between said stowed and deployed positions, said hydraulic piston and cylinder device having a first port through which hydraulic fluid under pressure from said source is admitted to one side of said device, said one side of the device being a high pressure side during operation of the device in a thrust reverser element deploy mode, to displace said element from its stowed position, a second port through which hydraulic fluid is displaced from a low pressure side of the device during operation in said deploy mode, a return line through which hydraulic fluid displaced from said low pressure side of said device is returned to said high pressure side of said device in addition to said fluid supply from said pressure source, and, a check valve in said return line preventing flow of hydraulic fluid from said high pressure side to said low pressure side of said device.

2. A thrust reverser assembly as claimed in claim 1 wherein said return line communicates with a low pressure line which receives excess displaced hydraulic fluid not returned from said low pressure side to said high pressure side of said device.

3. A thrust reverser assembly as claimed in claim 1 further including a flow restrictor to control the rate of discharge of hydraulic fluid from said low pressure side of said device so as to control the speed of movement of said element at least during its assisting load phase of deployment.
4. A thrust reverser assembly as claimed in claim 3 wherein said flow restrictor is positioned in said return line.
5. A thrust reverser assembly as claimed in claim 2 further including a flow restrictor to control the rate at which said excess hydraulic fluid flows in said low pressure line.
6. A thrust reverser assembly as claimed in claim 1 further including a flow restrictor to control the flow rate of hydraulic fluid from said high pressure source to the high pressure side of said device.
7. A thrust reverser assembly as claimed in claim 1 wherein said device is operated in a retracting mode to cause deployment of said thrust reverser element.
8. An hydraulic system for a thrust reverser assembly of the kind comprising at least one thrust reverser element which, during normal use in association with a jet engine, is movable between a stowed position and a deployed position and is so arranged as to experience an assisting load during movement of the element from the stowed position towards the deployed position and , a double-acting hydraulic piston and cylinder device for moving said element between said stowed and deployed positions, said

hydraulic piston and cylinder device having a first port through which hydraulic fluid under pressure can be admitted to one side of said device, said one side of the device being a high pressure side during operation of the device in a thrust reverser element deploy mode, and, a second port through which hydraulic fluid can be displaced from a low pressure side of the device during operation in said deploy mode, the hydraulic system comprising, an hydraulic fluid pressure source for connection to said first port, a return line for connection between said first and second ports and through which in use hydraulic fluid displaced from said low pressure side of said device is returned to said high pressure side of said device in addition to fluid supplied in use from said hydraulic fluid pressure source, and, a check valve in said return line in use preventing flow of hydraulic fluid from said high pressure side to said low pressure side of said double-acting hydraulic piston and cylinder device.

9. An hydraulic system as claimed in claim 8 further including a first flow restrictor to control the rate of discharge of hydraulic fluid from said low pressure side of said device so as to control the speed of movement of said element at least during its assisting load phase of deployment, and a second flow restrictor to control the flow rate of hydraulic fluid from said high pressure source to the high pressure side of said device.